

### **REMARKS**

In response to the Office Action mailed December 7, 2010, Applicant respectfully requests reconsideration. Claims 1 and 3-5, 7-13, and 16 were previously pending for examination. Claims 1 and 5 are amended herein. No claims are canceled or added. As a result, claims 1 and 3-5, 7-13, and 16 remain pending for examination, with claims 1 and 5 being independent. No new matter has been added.

### **Non-Final Action**

The current Office Action has listed this action as non-Final. However, there was a notice in the text at the end of the current Office Action stating that this action was final. Applicants' Representative confirmed that the current Office Action is non-Final with the Examiner. Consequently, the current response is being filed as a Response to a non-Final Office Action.

### **Rejection under 35 U.S.C. § 112**

The Office Action rejects claims 1, 3-5, 7-13 and 16 under 35 U.S.C. § 112, second paragraph, as purportedly being indefinite for failing to particularly point out and distinctly claim the subject matter.

The current Office Action states claims 1 and 5 are indefinite for the use of the phrase "high amount", (Current Office Action page 3). Applicants have herein amended claims 1 and 5 to recite, "the crust-forming fire-retardant material is present in such an high amount that a fire-retardant crust is formed..." Applicants believe that this amendment renders the claim definite because the amount is defined in terms of the result achieved. Furthermore, paragraph [0019] of the current specification provides non-limiting exemplary embodiments of possible amounts of fire-retardant material. In view of the above amendment, Applicants respectfully request that this rejection of claims 1 and 5 be withdrawn.

On page 3 of the current Office Action claims 1 and 5 are further rejected stating that it is:

“unclear what is meant by a “fire retardant crust is formed on a side of the foam...” It seems the foam would begin to expand from the exposed side but over time, wouldn’t the entire piece of foam expand, or is the opposite side of the foam composed of a material that does not expand?”

Applicants respectfully submit that the current Office Action has misinterpreted the current claim and the specification. Applicants submit that paragraphs [0025] and [0066] – [0069] of the current specification detail the formation of the fire retardant crust and expansion of the remaining material. These sections are discussed in detail below.

When exposed to heat, there is a difference in response between the different sides of the foam material since the opposing sides are subjected to vastly different temperatures due to a fire occurring on one side of the foam material (the exposed side). When exposed to the elevated temperatures of a fire, “a fire retardant crust is formed on a side of the foam”, as claimed, due to an initial expansion and subsequent chemical reaction of the material (Current specification paragraphs [0025] and [0067]). The material present in the newly formed fire retardant crust is essentially changed in composition due to this chemical reaction. Once formed, the crust insulates and seals the remaining material from direct exposure to the intense heat of the fire (Current specification paragraphs [0025] and [0067]).

In contrast to the fire retardant crust, the remaining material is exposed to lower temperatures, due to the insulating effect of the fire retardant crust, and the composition of the material substantially remains the same. Depending upon the proximity to the side exposed to the fire, the remaining material will be exposed to varying temperatures and will consequently expand to varying degrees. Material located closer to the exposed side may expand due to activation of the pH-neutralized graphite (Current specification paragraphs [0068]). The closed cells may also break open in this region (Current specification paragraphs [0068]). Material located towards the non-exposed side may experience temperatures low enough that the material in this region would maintain the closed cell structure and merely experience expansion of the foam due to thermal

expansion of the gas trapped within the closed cells of the foam (Current specification paragraphs [0025] and [0068] - [0069]). Therefore, expansion of the foam may occur over the entirety of the remaining material. However, the extent of the foam expansion and the mechanism linked to that expansion varies according to the location relative to the side exposed to the fire.

In view of the above, Applicants respectfully submit that the phrase a “fire retardant crust is formed on a side of the foam...” is definite as currently claimed. Such a limitation does not require differences in composition between the two sides of the foam nor does it preclude the expansion of the remaining foam material. Consequently, Applicants respectfully request that this rejection of claims 1 and 5 be withdrawn.

#### Rejections Under 35 U.S.C. § 103

The Office Action rejects independent claims 1 and 5 under 35 U.S.C. § 103(a) as purportedly being unpatentable over Landin (U.S. Patent No. 6,153,674). Applicants respectfully traverse these rejections.

There appears to be a typo in the main body of the Office Action stating that Landin is U.S. Patent No. 5,719,199. However, Landin is correctly cited as U.S. Patent No. 6,153,674 in the Notice of References Cited. For purposes of this response, the Landin patent is assumed to be the 6,153,674 patent.

#### I. Claim 1

The current Office Action rejects claim 1 stating that Landin discloses an elastomeric foam with a substantially closed cell structure (current Office Action page 3). The current Office Action specifically states that such a structure is disclosed by a reference to AIRFLEX 600BP located at col. 4 lines 21-24 of Landin as well as a reference to elastomeric properties at col. 3 lines 38-39. Applicants respectfully disagree with this characterization of the prior art. Instead, Landin actively teaches away from the use of a closed cell structure as detailed below.

The Landin patent is generally directed to a flexible self-supporting fire barrier material incorporating structural, binder, and fire resistant materials (Landin col. 3 lines 17-28). However, the Landin patent actively teaches defoaming of the material. For example, Landin teaches the use of a defoamer in multiple instances (Landin col. 10 lines 25-27, col. 13 lines 46-49, col. 16 line 66 – col. 17 line 6). Landin also teaches that the material may be further densified by calendering and drying the material. Defoaming and densifying a material is the opposite of foaming a material. In fact, the resulting material is dense enough that Landin discloses that the unfired material can be used to dissipate heat (Landin col. 11 lines 4-12). The above disclosures by Landin rise to the level of actively teaching away from the use of a foam in that Landin performs multiple steps specifically directed at avoiding the formation of a foam. In contrast, paragraph [0018] of the current specification describes purposefully using a blowing agent to foam the material. Consequently, claim 1 is patentably distinguishable from Landin for at least this reason.

In addition to the above, the referenced sections of Landin in the current Office Action (i.e. Landin col. 3 lines 38-39 and col. 4 lines 21-24) merely reference a binder instead of a foam as stated on page 3 of the current Office Action. Specifically, col. 4 lines 4-24 of Landin states that the binder is preferably in the form of a latex, i.e. a colloidal suspension of polymer in water that can be coagulated or precipitated out. Coagulating or precipitating a material out of a colloidal suspension does not create a foam. Furthermore, with regards to AIRFLEX 600BP, the specification of Landin states that it is an ethylene/vinyl acetate/acrylate terpolymer (Landin col. 4 lines 21-24). This is merely a disclosure of a specific polymeric material. There simply is no inherent or explicit disclosure that AIRFLEX 600BP is a foam or that any other foam is used in the manufacture of the flexible self-supporting fire barrier material of Landin. Therefore, the currently referenced sections of Landin do not disclose a closed cell foam. Consequently, claim 1 is patentably distinguishable from Landin for at least this reason.

In view of the above, Landin actively teaches away from the use of a closed cell foam and the sections referenced in the current office action merely reference a binder instead of a foam. Consequently, claim 1 is patentably distinguishable from Landin for at least these reasons. Therefore, Applicants respectfully request that the rejection of claim 1 be withdrawn.

## II. Claim 5

Claim 5 is allowable for substantially the same reasons as claim 1. Therefore, Applicants do not believe that it is necessary to argue the further distinguishing points of claim 5 at this time. Consequently, Applicants respectfully request that the rejection of claim 5 be withdrawn.

## III. Dependent Claims

Dependent claims 3-4 depend from independent claim 1 and are allowable for at least the same reasons. Therefore, Applicants do not believe that it is necessary to argue the further distinguishing points of these claims at this time. Consequently, Applicants respectfully request that the rejections of dependent claims 3-4 be withdrawn.

Dependent claims 7-13 and 16 depend from independent claim 5 and are allowable for at least the same reasons. Therefore, Applicants do not believe that it is necessary to argue the further distinguishing points of these claims at this time. Consequently, Applicants respectfully request that the rejections of dependent claims 7-13 and 16 be withdrawn.

**CONCLUSION**

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the undersigned at the telephone number indicated below to discuss any outstanding issues.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed payment, please charge any deficiency to Deposit Account No. 23/2825 under Docket No. B1215.70009US00 from which the undersigned is authorized to draw.

Dated: *March 7, 2011*

Respectfully submitted,

By 

Neil P. Ferraro  
Registration No.: 39,188  
WOLF, GREENFIELD & SACKS, P.C.  
600 Atlantic Avenue  
Boston, Massachusetts 02210-2206  
617.646.8000